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ABSTRACT

The study develops a model to explain the complex interactions which link the demands for academic achievement in the schools with the personal development of the learner on the premise that students develop a set of affective traits concommitantly with a pattern of academic accomplishments. The theoretical framework upon which the study is based is Robert White's (1959) theory of effectance motivation. The school is the milieu where important competencies and affective traits are developed; if the student successfully meets the demands of the school, he begins a healthy adjustment to society. The study was conducted in three schools in a middle-class neighborhood; students from second, fourth, sixth, and eighth grades were selected. Dealing with the three affective variables of self-esteem, self-concept of ability, and locus of control in the academic setting, the study explores the impact of successful and unsuccessful achievement over time on affective traits, the influence of the home on the relationships between academic achievement and affective traits, and the impact of perceived social roles on that relationship. (Author/SES)

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THE EFFECTS OF SCHOOL ACHIEVEMENT ON THE AFFECTIVE TRAITS OF THE LEARNER

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The General Problem

Recent speculations about the nature of schooling make it apparent that more is learned in school than the customary reading, writing and arithmetic. As students move through a school system they acquire not only academic skills such as the abilities to manipulate words and numbers but also a set of characteristics or normative behaviors which prepare them to function in the larger social and economic system (Dreeben, 1968).

How various "non-academic" characteristics are acquired and how the school is organized to produce them is a question which can be approached from a variety of points of view. Those investigators who focus on the school as a social organization (Clausen, 1968, Parsons, 1959) emphasize the power of the schools to impart norms of behavior, occupational skills and pre-requisites for citizenship. Other investigators (Bloom, 1972; Glidewell and Stringer, 1968), concerned with the impact of schooling on the psychological functioning of the child, ask how expectations and activities in the classroom setting affect the personal development of the child.

This latter area of inquiry inevitably makes a connection between the emphasis on academic achievement in the school and the personality development of the learner. In the process of meeting the achievement expectations of the school, the child learns much about himself and his abilities. Those children who succeed in meeting the expectations of the school tend to develop healthy personalities; those who fail tend to exhibit signs of emotional difficulty (Bloom, 1972).

That the traditional school setting expects students to achieve academically cannot be denied. Children enter the school with limited amounts

of skill and knowledge and may emerge ten, twelve or sixteen years later with a repetoire of acquired academic proficiences. In the process of gaining this academic competence, students have innumerable opportunities for success or failure and can establish patterns of accomplishment. The impact of these established patterns of academic achievement on the affective traits of the learner is the general question toward which this investigation is aimed.

Based on the area of inquiry which links the demands for academic achievement in the schools with the personal development of the learner and on the premise that students develop a set of affective traits concomitantly with a set or pattern of academic accomplishments, this study developed a model to explain these complex interactions. Although the model changed the perspective from which the interaction of academic achievement and affective traits was viewed, its genesis is in past attempts of researchers to link the two phenomena.

The Theoretical Model

The theoretical framework upon which the present study is based is Robert White's (1959) theory of effectance motivation. As conceived originally by White, effectance motivation deals with the propensity of organisms to interact with the environment for purposes of gaining competence. (i.e., The pre-disposition of the organism to manipulate and alter the milieu which surrounds it.) Through those competent interactions, the organism not only gains a <u>sense</u> of competence but also what White calls <u>feelings of efficacy</u>.

White's further elaboration showed how the theory of effectance motivation could be applied to stages of human development (1963). In

this paper, he emphasized the development of social competence and the concommitant feelings of efficacy as persons learned to operate effectively in various social milieus. He emphasized the importance for children to learn to deal successfully with a variety of "social" situations and how dealing effectively with those situations would produce positive affective responses.

For the purposes of this study, the school is posited as a milieu in which important competencies and, concommitantly, important affective traits are developed. By successfully meeting the demands of the school setting, it is assumed, the student develops a sense of competence and begins a healthy adjustment to the complex society of which he is a part.

Although the school setting is the focus of the study, another milieu- the home - is an integral part of the theoretical model. The home can reward and punish the child's behavior in ways which either help or hinder the child's ability to succeed in the tasks defined by the school.

The differential treatments of children in the home, and the resulting variety of expectations for the child will, therefore, affect the relationship between the child's school success or lack of it and the development of positive affective traits. This differential treatment by the home manifests itself in at least two distinct ways: first, if the home and school present a congruent pattern of rewards and punishment, the child's affective development is enhanced; if they conflict, the development is impeded; second, by defining social roles for the children, the home can influence the child's perceptions of what can and what should be accomplished in the school setting. This model, therefore, posits the interaction of the home and school milieus in the development of the child's affective traits.

A further specification of the theoretical model is that the affective traits develop over time. It is not until the student develops a pattern of consistent success or failure that its impact on the affective traits is most apparent. In the school setting, the impact of the child's success or failure on the developing affective traits will be most evident for students who exhibit consistent patterns of accomplishment and who have experienced success or failure over an extended period of time.

The development of a theoretical model for growth of affective traits as consequences rather than antecedents of successful or unsuccessful achievement represents a departure from the views of the inter-relationships of the two phenomena as represented by other research strategies. Instead of looking for a prediction equation, including affective variables, which can account for the most variance in achievement, or by seeking variables in the affective domain which discriminate among achievers, this model emphasizes the continuing inter-relations of the variables and the processes by which one facet of the person develops simultaneously with another.

Because the theoretical formulation changes the perspective from which the phenomena are viewed, it leads to different questions about the relationships between affective traits and achievement. Some of those questions were asked and attempts to answer them made, when this theoretical model was made operational for the present study.

Operationalizing the Model

Instead of making the achievement variables the criterion and the affective variables the predictors, the purpose of this study was to explain the relationships among some affective variables and academic

achievement as they change over time and as they operate in the school setting.

Since primary aspects of the theoretical model and the questions asked by the study are: 1) the impact of successful and unsuccessful achievement over time on affective traits; 2) the influence of the home on the relationships between academic achievement and affective traits; and, 3) the impact of perceived social roles on that relationship, it was necessary to choose variables which appropriately represented those aspects of the model.

Success or failure in school was defined operationally as grades students receive in academic subjects. It was assumed that grades, because of their immediacy and socially determined importance, were measures of the kinds of rewards students receive for achievement efforts. Instead of a direct measure of the home environment, which may have been preferable, this study used a paper and pencil test to ascertain the child's perceptions of how the home supported achievement efforts. The measure was designed to tap aspects of the home environment which, in previous research, were related to academic achievement. The third aspect of the model was made manifest by choosing approximately the same numbers of boys and girls for the study. Since many roles and many expectations in our society are gender related, the choice of sex as a proxy variable for number and availability of roles seemed reasonable. In addition, previous research had established some differences between boys and girls in the relationships between academic achievement and affective traits.

The variables used to represent the selected affective traits were a self-esteem measure, a measure of self-concept of ability and a measure of the student's locus of control (internal versus external) as related

to the school setting. These variables were selected because they represented important dimensions of the student's personality and because they seemed logically to be related to activities and experiences in the school.

The study was conducted in three schools in a middle-class neighborhood. The design of the study included two parts: 1) A quasi-longitudinal part where students from 2nd, 4th, 6th and 8th grades were selected according to patterns of academic achievement. Two groups, one which had established patterns of successful accomplishments and another which had established patterns of unsuccessful accomplishments, with equal numbers of boys and girls, were selected at each grade level. Comparisons, related to the main hypotheses of the study, were made across grade levels to assess trends over time; 2) A part where students who varied across the full range of achievement were selected. These students were 5th and 7th graders. The data from this sample were used to elaborate findings of the quasi-longitudinal part of the design and to obtain estimates of linear relationships between the achievement variables and the affective variables. Table 1 gives a summary of the study and the findings.

The Results of the Study

The first, and major hypothesis, was to determine if consistent successful or unsuccessful school achievement had a cumulative effect on the affective traits of the learners. The results indicated, that academic achievement does have a cumulative effect on dimensions of the student's personality. Successful students did have more positive affective traits and the differences in scores between successful and unsuccessful students did, in general, increase over time.

Although the analysis supported the main thrust of the study, more precise aspects of the model, represented by the final two hypotheses and based on different degrees of parental concern and support for achievement and sex differences, were not substantiated. Neither the interaction of grades with home concern nor grades with sex were found. Why not?

First, in terms of the home concern variable, the theoretical model suffered little. Rather than producing the hypothesized interaction, home concern was a main effect. The impact of home concern on the affective traits was positive regardless of the level of achievement of the student.

In addition, the home concern variable appeared to have a much greater effect in the early elementary years than it did in the later ones. Success in school, however, tended to have its most powerful effects in the later years. The home concern variable seemed to provide a more important input to self-esteem than to the self-concept of ability which was more heavily influenced by activities in the school. The home concern variable, then proved to be a most important aspect of the model and must be included in an explanation of the relationships between school achievement and positive affective traits.

In terms of the sex differences, the expectations of the study were not fulfilled. It was true, however, that girls who were unsuccessful had lower scores generally on the affective variables than did unsuccessful boys. In a sense, one half of the expected interaction occurred. Although the model would be more powerful if the sex differences could be substantiated statistically, the direction of the difference remained worthy of note. It appeared, though not definitively, that answers to the problems of the relationships between academic achievement and affective traits should take into account the differences between sexes. Figures 1, 2 and 3 depict the results of the study for each hypothesis.

The linear relationships among the variables in the study conformed reasonably well to the expectations and premises upon which the study was designed. Correlations between student grades and the affective variables were higher in the seventh grade than in the fifth grade groups. This relationship held for each of the affective traits in each of the grades. This was the expected result if, as the model suggested, academic grades acted as a means by which students judge themselves and their standing relative to their peers, using those judgements as a basis for building the affective traits. The fifth graders, having had less time to make their judgments and less experience in making those judgments, were expected to produce lower correlations between grades and the affective traits. This pattern of correlations, then, substantiated the findings of the quasi-longitudinal part of the design.

Though designed primarily to tap the students' perceptions of parents' concern and rewards for academic achievement behaviors, the home concern instrument evidently tapped a broader trait. The correlations between the general self-esteem inventory and the home concern variable were higher than those between the specific measures and home concern. All of the correlations between home concern and the affective traits were higher than ones between home concern and either academic grades or achievement test scores. The relationships held across groups and grade levels. Correlations with home concern were higher at the fifth grade level than in the seventh grade, the opposite of the correlations among the achievement measures and the affective traits. This pattern, coupled with the finding of a main effect for the home concern variable, suggested that home concern was a valuable input for the development of affective traits and that the earlier a student perceived that concern the better

off he was. The question of how broad the trait was that the instrument measured and how the variable might relate to others must be determined in subsequent investigation.

The separate correlation matrices for boys and girls showed that grades and affective traits were correlated higher for boys than for girls. A number of other studies have reported such results so they came as no surprise. What may have been surprising, however, was the fact that those lower correlations for the girls may be accounted for by the fact that successful girls had more positive affective traits than successful boys and that unsuccessful girls, in general, had less positive affective traits than unsuccessful boys. The increased variance in the girls' scores accounted for the lower correlations. Though these correlations provided no definitive answers to the questions of sex differences in the relationship between affective traits and academic achievement, they served to underscore the findings of the first part of the design. Table 2 gives a summary of the important correlation coefficients.

Together the results of the two parts of the design provided strong support for the model being considered in this study. The evidence suggested that academic achievement behaviors were important contributors to the growth and development of affective traits. And, they supported the notion that a consistent pattern of success or failure had a cumulative effect on those traits. Of substantial importance, too, according to the findings, was the child's perceptions of parental concern and rewards for academic achievement, and the effects of those perceptions on the affective traits. Although the sex differences were not substantiated statistically, the findings indicated that such differences should be

considered.

Implications of the Results

Having briefly reviewed the findings of the study, it is now appropriate to discuss what those findings mean in terms of current practices in the school and for education in general. These implications will be discussed as they relate to each hypothesis.

Before discussing the implications of the study, it is appropriate to review briefly the major limitations of it. First, the study was concerned with one period of time in the life cycle, ages 7 through 12. Results for other age groups might be different. Second, the study focused on particular aspects of the school setting and selected specific student perceptions of activities in the school to determine how affective traits were related to those dimensions. A particular limitation in this regard was the fact that success in school was limited to and equated with grades in academic subjects. The study was done in three schools in a middle-class neighborhood. The generalizability of the study is, thus, limited.

This study dealt with three affective variables: self-esteem, self-concept of ability and locus of control in the academic setting. They were selected because they represent important dimensions of a student's personal development.

From the results of the first hypothesis it can be inferred that positive self-esteem, self-concept of ability and locus of control are consequences of consistent, successful academic achievement. Assuming that positive affective traits are desirable, then the need for students to have experiences of success is evident. The first implication of the

results is, therefore, the need for structuring experiences in the school so each child is provided an opportunity to be successful.

Those experiences which must be structured to produce success are ones which involve academic achievement. It is through instruction and evaluation, as implied by the study, that a student begins to view himself as successful or unsuccessful, and if successful, begins to develop a sense of competence and, concommitantly, positive affective traits. Instructional strategies, therefore, should be designed to maximize the probability that each student feels a sense of accomplishment. Teachers, when selecting strategies, should not choose those which insure that only a few students feel competent but should aim to give the majority of students perceptions of having worked successfully.

Of particular interest here is the implementation of instructional strategies such as Mastery Learning (Bloom, 1969) or individualised instruction. These approaches are united by their idea that academic achievement is a manipulable variable and that a great majority of students can excel in academic activities. If these instructional strategies can insure that most students excel academically, it would be expected that the same students would develop positive affective traits.

Of course, although success itself is important, a series of successful accomplishments is even more desirable. The findings of the study indicate that there is a cumulative effect of successful experiences so it is necessary to structure those experiences in order for students to feel successful over an extended period of time. The crucial facets of successful accomplishments are, apparently, consistency and longevity.

Though the need for a history of success, too, is related to instructional strategies, the most important consequence of this finding may be in terms

of what to expect from intervention programs (i.e., Head Start and Operation Follow Through). These programs, especially the latter, have both cognitive and affective goals for children. If the programs are to be successful in developing positive affective traits, the crucial variables may be consistent experiences of success and the length of time the programs are operative. If an educational milieu is to have its impact on student traits, programs must not only provide successful experiences but must also provide the time for those experiences to have their impact. Patterns of, and consistency of, experiences of success are of the essence.

The second major finding of the study, that home concern had a major effect on the development of affective traits and, especially for younger children, its impact was major, may make a history of successful experiences a necessary but not sufficient condition for producing the desired effects of instructional programs. Where previous research has established the home both as a learning environment and a center for the development of affective traits, the findings of this study suggest that they are interactive processes. As the home provides appropriate rewards and shows concern for achievement activities, it is in the process of producing positive affective traits.

The more the home supports and reinforces the goals of instruction in the school, the more likely it is that students meet the expectations of the school, achieve competently and develop positive affective traits. Programs should not limit themselves, therefore, to changing only the structure of experiences in the educational setting but should encourage participation of parents and parental education about the programs. By emphasizing the learning which occurs both in the school and the home setting, program goals in the affective domain will

be more often and more efficiently met. This supports the emphasis Gordon (Maccoby, 1970) places on involving the parents in the education of their children and on learning in the home setting. One would hypothesize, based on the findings of this study, that those instructional strategies and programs which emphasize learning and concern in both milieus - home and the school - will produce both higher achievement and more positive affective traits.

The final hypothesis dealt with sex differences in the relationships between academic achievement and affective traits. Though, as stated earlier, the results indicate that sex differences may exist, the implications of the lack of substantial differences between the sexes may revolve around the notion that gender is the wrong variable. It was argued that gender-related expectations and availability of roles in our culture could affect the relationships between achievement and affective traits. For that reason sex was chosen as a proxy variable for role expectations and availability. Conceivably that aspect of the model could better be tested with measures of the child's perceptions of what is expected and what limits, in terms of number and variety of roles, are perceived. The real differences may not be so much gender-related as they are functions of individual perceptions.

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TABLE 1: SUMMARY OF THE STUDY

THE EFFECTS OF SCHOOL ACHIEVEMENT ON THE AFFECTIVE TRAITS OF THE LEARNER

I. The sample: The sample was composed of 441 elementary school children from an upper-middle class suburb of Chicago. About 215 students, approximately 50 students each from the 2nd, 4th, 6th and 8th grades were selected for their achievement records. One group had been successful through their entire school careers (top 20%); the other unsuccessful (bottom 20%). These groups were used for the statistical analysis of the main part of the design.

In addition, about 225 students, who varied across the full range of academic achievement, were selected from the 5th and 7th grades. These groups were used for a statistical analysis to elaborate findings of the main part of the design.

I. The variables: The Coopersmith Self-Esteem Inventory, Crandall's Intellectual Achievement Responsibility Scale and Brookover's Self-Concept of Ability Scale were used to assess the students' views of themselves and their abilities.

I. Constructed instruments: A measure of the students' views of their parents' concern and rewards for academic achievement was constructed. It had 18 items and was based on previous research which established the effect of the home on academic achievement.

V. Design and Data Analysis procedures: The general design (a quasi-longitudinal one) used for the main part of the study, was a 2 (success - failure) x 4 (grades levels) x 2 (high and low home concern) x 2 (sexes) factorial with 3 dependent variables. Multivariate analysis of variance was used to test the effects of interest.

For the supplementary part of the design which included 5th and 7th graders, a variety of correlation measures were used to substantiate findings of the main design.

V. The Hypotheses and the Findings:

Hypothesis	Statistical Test	Results
Consistent successful or unsuccessful academic achievement over time will have no cumulative effect on the way students view themselves and their abilities.	Tested by the interaction between successful and unsuccessful groups and the 4 grade levels.	Multivariate F significant; $p \leq .0001$
There will be no difference between boys and girls in the relationships between successful and unsuccessful school achievement and their perceptions of themselves and their abilities.	Tested by the interaction between the successful and unsuccessful groups and the two sexes.	Multivariate F not significant;
There will be no difference between those students who receive home concern and rewards for achievement and those who do not in the relationship between successful and unsuccessful school achievement and the way students view themselves and their abilities.	Tested by the interaction between the successful and unsuccessful groups and the high and low home concern groups.	Multivariate F not significant for the interaction; home concern and reward for achievement was a main effect with Multivariate F significant $p \leq .0001$

Table 2 . Correlations Among Teachers' Grades, Home Concern and the Affective Traits by Grade and Sex

	5th Grade					7th Grade				
	SE	SCA	IAR	HC	TG	SE	SCA	IAR	HC	TG
Self-Esteem										
Self-Concept of Ability	.31					.35				
IAR	.42	.17				.30	.19			
Home Concern	.46	.24	.42			.34	.22	.25		
Teachers' Grades	.36	.23	.26	.07		.35	.50	.31	.19	

	5th Grade - Girls					5th Grade - Boys				
	SE	SCA	IAR	HC	TG	SE	SCA	IAR	HC	TG
Self-Esteem										
Self-Concept of Ability	.38					.22				
IAR	.41	.06				.43	.25			
Home Concern	.49	.21	.25			.44	.26	.47		
Teachers' Grades	.29	.23	.26	.02		.40	.20	.26	.13	

	7th Grade - Girls					7th Grade - Boys				
	SE	SCA	IAR	HC	TG	SE	SCA	IAR	HC	TG
Self-Esteem										
Self-Concept of Ability	.30					.42				
IAR	.35	.20				.24	.17			
Home Concern	.18	.01	.26			.53	.45	.34		
Teachers' Grades	.34	.42	.31	.08		.35	.73	.25	.36	

Figure 1. Observed Combined Means for the Affective Traits of Successful and Unsuccessful Students by Grade Levels.

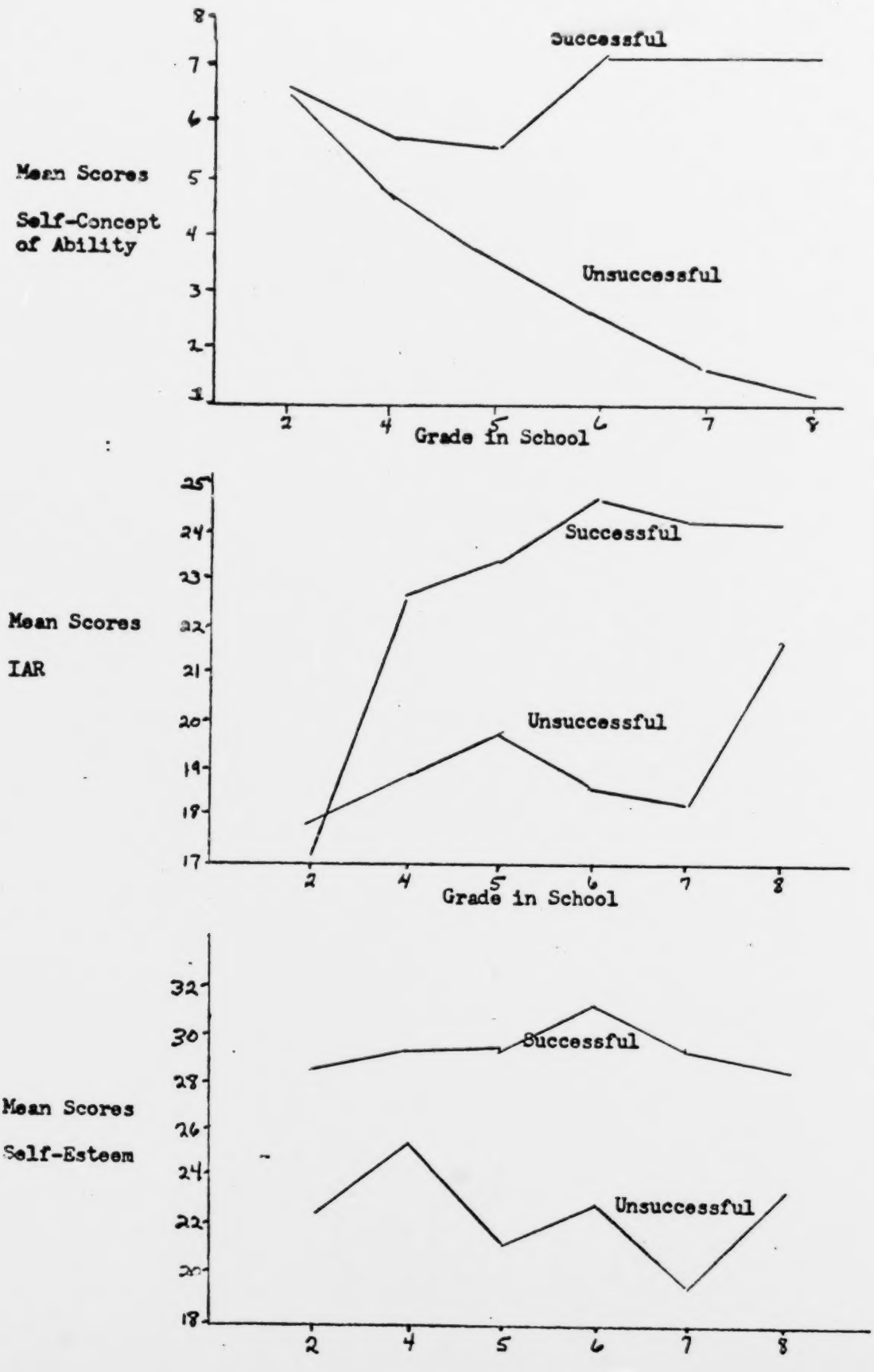
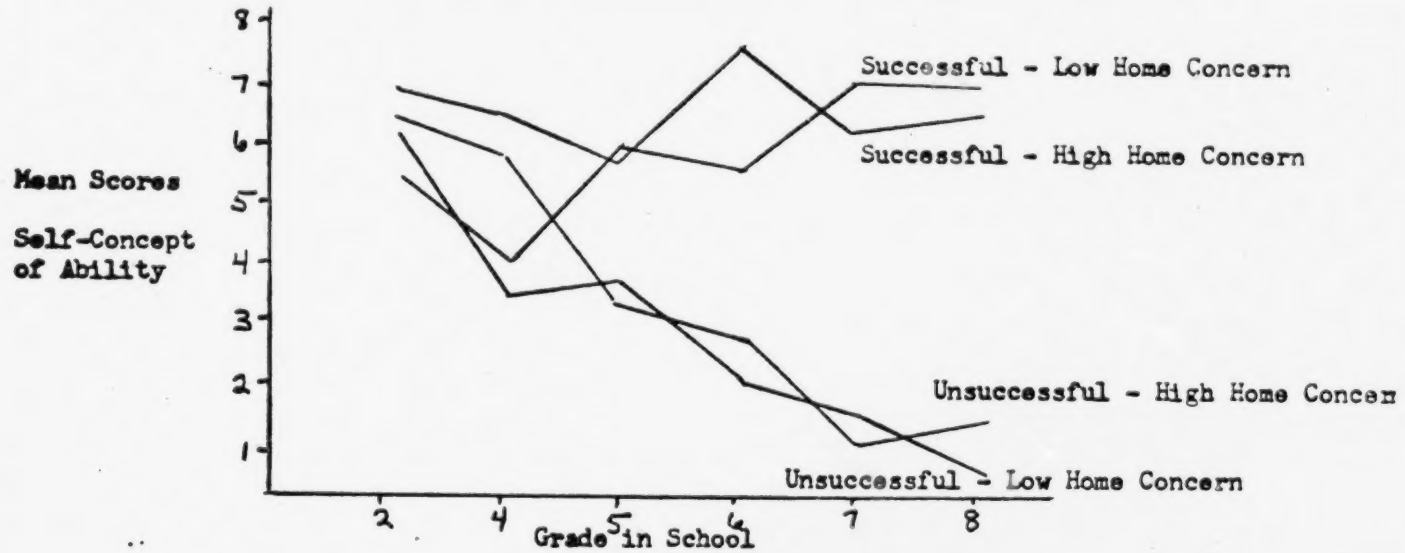
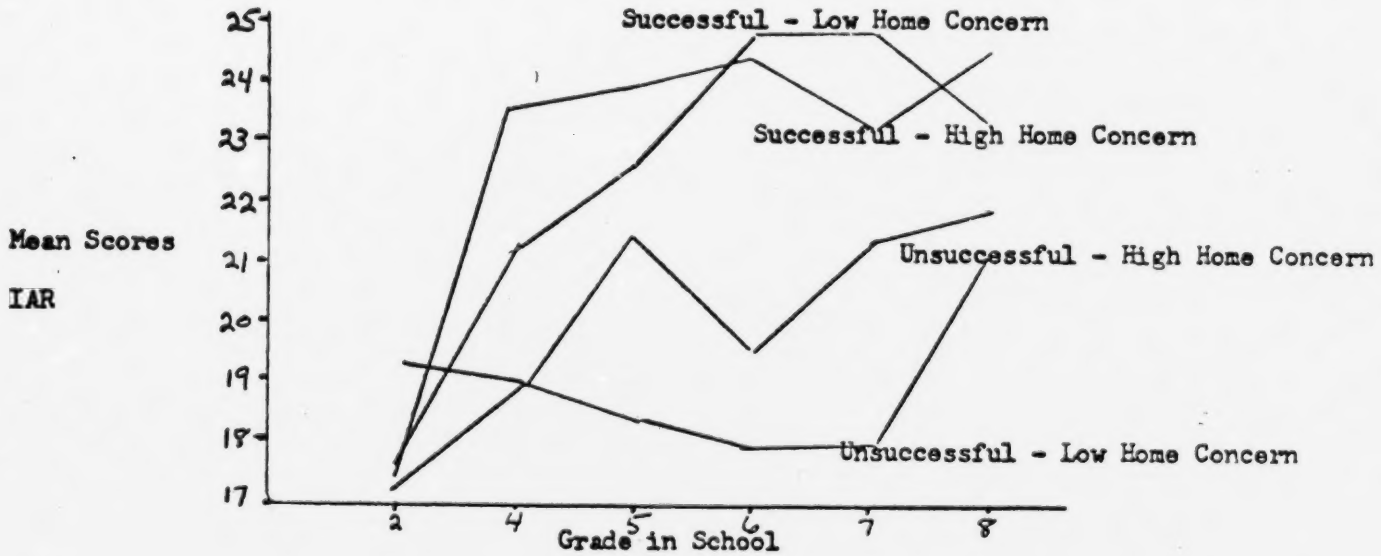


Figure 8. Observed Combined Means for the Affective Traits of Successful and Unsuccessful Students with High and Low Home Concern by Grade Levels.





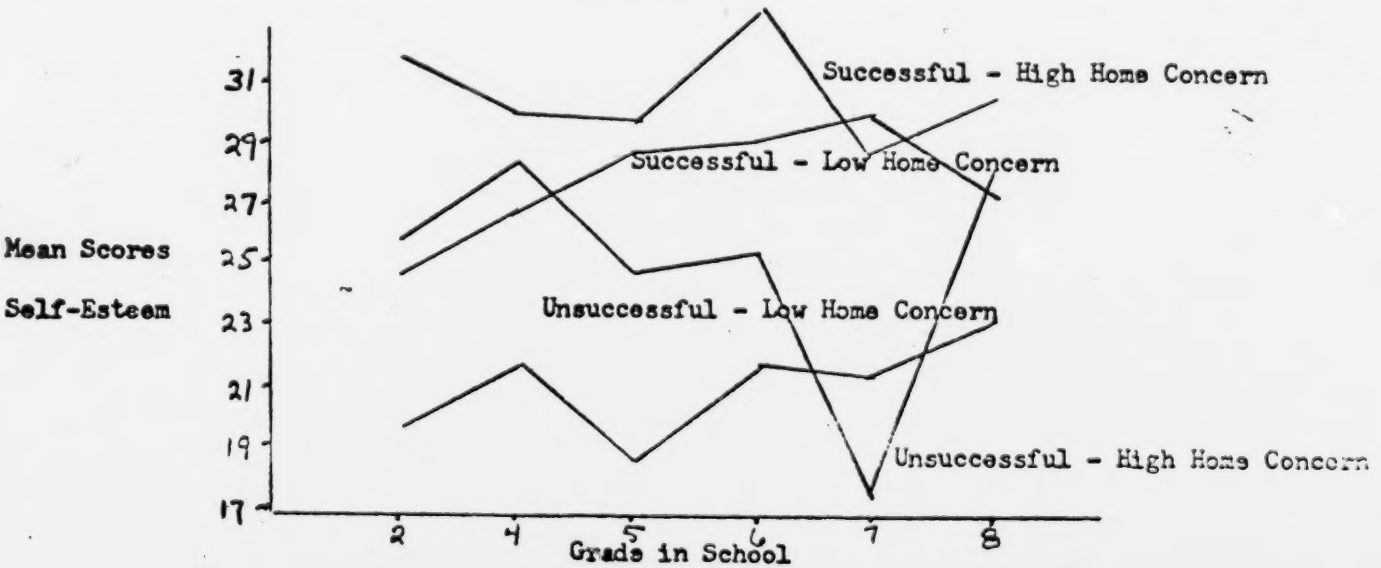


Figure 3. Observed Combined Means for the Affective Traits of Successful and Unsuccessful Boys and Girls by Grade Levels.